



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

FRIDAY, APRIL 28, 1916

MATHEMATICS IN NINETEENTH CENTURY SCIENCE¹

CONTENTS

<i>Mathematics in Nineteenth Century Science:</i> PROFESSOR HENRY S. WHITE	583
<i>Seeing Yourself Sing:</i> PROFESSOR CARL E. SEASHORE	592
<i>Orville A. Derby:</i> DR. JOHN C. BRANNER	596
<i>Paris-Washington Longitude</i>	596
<i>Scientific Notes and News</i>	598
<i>University and Educational News</i>	599
<i>Discussion and Correspondence:—</i>	
<i>Those Fur Seal Bones:</i> GEORGE ARCHIBALD CLARK. <i>Materials in a Ton of Kelp, The</i> <i>Toxicity of Bog Water:</i> GEORGE B. RIGG. <i>Exhibition of the Royal Photographic So-</i> <i>cietty:</i> DR. C. E. K. MEES. <i>The Carnegie</i> <i>Foundation:</i> J. McKEEN CATTELL	600
<i>Scientific Books:—</i>	
<i>Kingsbury on the Telephone and Telephone</i> <i>Exchange:</i> PROFESSOR A. E. KENNELLY. <i>Washburn's Introduction to the Principles</i> <i>of Physical Chemistry:</i> PROFESSOR CHARLES A. KRAUS. <i>Guyon on Being Well Born:</i> PROFESSOR WM. E. KELLICOTT	603
<i>Notes on Canadian Stratigraphy and Paleon-</i> <i>toLOGY:</i> KIRTLEY F. MATHER	607
<i>Special Articles:—</i>	
<i>The Theory of the Free-martin:</i> PROFESSOR FRANK R. LILLIE. <i>A Chemotropic Response</i> <i>of the House Fly:</i> C. H. RICHARDSON	611
<i>Societies and Academies:—</i>	
<i>The American Society of Ichthyologists and</i> <i>Herpetologists:</i> ROBERT C. MURPHY. <i>The</i> <i>Indiana Academy of Science:</i> A. J. BIGNEY.	617

THE treasures of one age are the rubbish of the next age. Ideas, like things material, are mostly transient. The present possesses but little of that which the past, with infinite labor, has acquired. Our estimate of values changes from century to century, and often with reason: what was once useful is found under later conditions to be wasteful, and new knowledge piles old machinery upon the scrap-heap.

Considered in this light, the science of even one hundred years ago looks antiquated to a schoolboy of to-day. But what of the exceptions? Not all knowledge is novel, and there are indispensable truths and fundamental principles that were discovered thousands of years ago. Most of our exact science is, however, new since the time of Galileo, Bacon and Newton; and it is probably not far from the truth to say that three fourths of the knowledge at present constituting exact science was discovered in the course of the nineteenth century.

Every generation must either advance, or lose much of what it has inherited; only as it is used for finding new knowledge is the value of the old science understood. I speak to-night to a group of younger students of science, into whose hands are committed from the past whatever they can use of accumulated knowledge; and who have announced, by the badge of Sigma Xi, their devotion to the highest ideal in science, that of increasing its definite content

MSS. intended for publication and books, etc., intended for review should be sent to Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

¹ Address before the Syracuse Chapter of the Sigma Xi, March 15, 1915.